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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
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09/416.839 10/12/99 EHWALD

R	EWALD 16.570
EXAMINER	

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MM01/1214

ART UNIT	PAPER NUMBER
WIGGINS, J	

2856
DATE MAILED:

05

12/14/00

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

- ☒ Responsive to communication(s) filed on 10/12/1999 (Application for US Patent)
- ☐ This action is FINAL.
- ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

- ☒ Claim(s) 1-9 is/are pending in the application.
- Of the above, claim(s) _____ is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-9 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

- ☒ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- ☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
- ☐ received.
- ☐ received in Application No. (Series Code/Serial Number) _____
- ☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

- ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- ☒ Notice of Reference Cited, PTO-892
- ☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 03
- ☐ Interview Summary, PTO-413
- ☒ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

Art Unit: 2856

Part III DETAILED ACTION

Examiner's Office Action

Drawings

1. *This application has been filed with formal drawings which have been judged acceptable on their technical merit by the Examiner, and found to have acceptable quality by the US PTO draftsman in a Patent Drawing Review done on 01/06/2000.*

Specification

2. The disclosure is objected to because of the following informalities:

On Page 06, line 19 of the specification; please replace the misspelled word "mechanic" with the following intended correct form:

--- mechanical ---

On Page 03, line 12 of the specification; before the word "receptor", please consider inserting the following term:

--- affinity ---

On Page 12, line 11 of the specification; after the word "electrodes", please consider inserting the following term:

--- arranged to be mutually separated ---

Art Unit: 2856

On Page 02, line 16 of the specification; please replace the non-correct grammar choice "buttom" with the following intended word:

--- bottom ---

On Page 04, line 05 of the specification; please replace the non-correct grammar choice "osciallation" with the following intended word:

--- oscillation ---

On Page 03, line 12 of the specification; please replace the non-correct grammar choice "ageous" with the following intended word:

--- aqueous ---

On Page 06, line 12 of the specification; please replace the non-correct grammar choice "fibre" with the following intended word:

--- fiber ---

On Page 15, line 04 of the specification; please replace the non-correct grammar choice "branche" with the following intended word:

--- branch ---

On Page 15, lines 10 & 13 of the specification; please replace each of the non-correct grammar choices "threeangular" with the following intended word:

--- three angular ---

On Page 19, line 06 of the Abstract Sheet; after the word "resistance", please consider inserting the following text:

--- for such sensitive liquid flowing thru a capillary, needle-like body or other liquid conductor, which integrated combination

Art Unit: 2856

of a dialysis chamber with viscosimeter enables a researcher to make measurements under lab conditions that provide spatial separation of the dialysis process from the rheological analysis, as done under test conditions where the maximum shear rate of sensitive liquid in the viscosity sensor is at least twice that shear rate of sensitive liquid experienced in the dialysis chamber ---

On Page 19, line 08 of the Abstract Sheet; after the word "matrix", please consider inserting the following phrase:

--- or organ of living tissue ---

Appropriate correction is requested or required.

Claim Rejections - 35 USC § 112

3. Claims 1-9 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The independent claim 1 is rejected as being vague and ambiguous because of need to include a prior mention of "a sensitive liquid", "a shear rate", "a measuring process", and "a dialysis chamber" in order to avoid a lack of proper antecedal basis problem found at lines 2, 3-4, 4 & 5 thereof, respectively.

Art Unit: 2856

In regards to claims 2 and 8, the rejection is based on vagueness that results because of showing a lack of proper antecedal basis due to the unprecedented usage of the terms "flow resistance" and "cohesion" at lines 3 and 3 thereof, respectively. In regards to claims 7 and 9, the rejection is based on vagueness that results because of showing a lack of proper antecedal basis due to the unprecedented usage of the terms "electrodé(s)", "position" and "meniscus"; plus "lumen" and "dialysis membrane" at lines 1, 3, 3; 2 & 3 thereof, respectively. In order to correct these above stated deficiencies, the Examiner recommends that the Applicant adopt changes similar to the below stated proposals for claim amendment (also please see and consider appropriate changes stated above at Paragraph 02):

On Page 17, claim 1, line 01; after the word "viscosimetry", please consider inserting the following text:

--- in a liquid known sensitive to a shear rate applied to said liquid while circulating through an integrated dialysis chamber
during a dialysis process, said dialysis process ---

On Page 17, claim 1, line 02; after the word "liquids", please consider inserting the following phrase:

--- via a flow resistance means ---

Art Unit: 2856

On Page 17, claim 1, line 03; please consider replacing the word "viscosity" with the following phrase:

--- determining viscosity during a measuring process ---

On Page 17, claim 1, line 04; after the word "liquid", please consider inserting the following phrase:

--- indicated by said viscosimeter measuring device ---

On Page 17, claim 1, line 02; before the word "conductor", please consider inserting the following term: --- liquid- ---

On Page 17, claim 2, line 03; after the words "dialysis chamber", please consider inserting the following text:

--- having a specified tubular lumen and dialysis membrane ---

On Page 17, claim 2, line 03; after the word "for", please consider inserting the following text: --- determining ---

On Page 17, claim 2, line 05; after the word "liquid", please consider inserting the following text:

--- characterized by a cohesion parameter ---

On Page 18, claim 7, line 02; please consider replacing the misspelled word "ore" by the following correct and intended form:

--- or ---

On Page 18, claims 5-6 & 8-9, line 1; after the words "according to", please consider deleting the following phrase from text line

--- one of the ---

Art Unit: 2856

On Page 18, claim 6, line 04; after the word "water", please consider inserting the following text:

--- , thereby manifesting a separation interface at a meniscus position between said fluid and said sensitive liquid ---

On Page 18, claim 7, line 02; after the word "contains", please consider inserting the following phrase: --- a set of ---

Allowable Subject Matter

4. Claims 1-9 would be allowable if rewritten or amended to overcome the rejection under 35 U.S.C. 112.
5. The following is an Examiner's statement of reasons for allowance: The prior art fails to disclose a process for ***measuring analyte concentration by affinity viscosimetry*** by pumping a sensitive liquid through a streaming liquid-conductor used in an ***integrated*** dialysis chamber /viscometer where the ***measured maximum shear rate of the sensitive liquid at such viscometer is at least twice the maximum shear rate of the same sensitive liquid undergoing dialysis in the dialysis chamber.***

Art Unit: 2856

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The references cited on the accompanying form PTO-892 are listed to show examples of state of the art apparatus and methods for determining viscosity or analyte/solute concentration or density in fluids such as liquids & gases via flow rate or flow resistance measurements involving shear rate or shear stress [whether or not by using an affinity viscometer, or whether or not dedicated to blood/plasma fluids perfusion and kidney dialysis machines/pumps], which share one or more features in common with the instant invention.

7. Since allowable subject matter has been indicated, applicant is encouraged to submit formal drawings in response to this Office action. The early submission of formal drawings will

Art Unit: 2856

permit the Office to review the drawings for acceptability and to resolve any informalities remaining therein before the application is passed to issue. This will avoid possible delays in the issue process.

8. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to J. David Wiggins whose telephone number is (703) 305-4884. The Examiner can normally be reached on Monday to Friday from 9AM to 7PM.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's Supervisor, Hezron E. Williams, can be reached on (703) 305-4705. The fax phone number for this Group is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group Receptionist whose telephone number is (703) 305-4900.


Hezron Williams
Supervisory Patent Examiner
Technology Center 2800

JDW
WIGGINS/jdw
December 11, 2000